

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

- 1-13. (canceled).
14. (currently amended): A coextruded heat-sealable film structure, comprising:
- (a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;
 - (b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and
 - (c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer; and
 - (d) ~~wherein the heat-sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C;~~
 - (e) wherein the core layer has a polymeric matrix selected from the group consisting of a ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene; and
 - (f) wherein the core layer comprises a cavitating agent selected from the group consisting of polybutylene terephthalate, calcium carbonate, and blends thereof.
15. (currently amended): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

~~(d) wherein the heat sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C.; and~~

(e) wherein the second film is comprised of the same structure as the first film.

16. (currently amended): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

~~(d) wherein the heat-sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C.; and~~

(e) wherein the core layer has a polymeric matrix selected from the group consisting of a propylene homopolymer, a propylene copolymer, and a polyethylene.

17. (currently amended): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

~~(d) wherein the heat-sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C.; and~~

(e) wherein the antiblocking agent is a particulate antiblocking agent having an average particle size of from about 1 to about 5 μm .

18. (currently amended): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

~~(d) wherein the heat sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C.; and~~

(e) wherein the core layer has a polymeric matrix selected from the group consisting of an ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene.

19. (currently amended): The laminate film structure of claim 16, wherein the silicone gum has a viscosity in the range of 10 to 20 million centistokes.

20. (currently amended): The laminate film structure of claim 16, wherein the core layer further comprises an additive selected from the group consisting of a natural hydrocarbon additive, a synthetic hydrocarbon additive, a cavitating agent, an antistatic agent, and mixtures thereof.

21. (currently amended): The laminate film structure of claim 16, wherein the functional layer further comprises at least one antiblock additive.

22. (currently amended): The laminate film structure of claim 16, wherein the surface of the functional layer is flame treated or corona treated and the surface of the heat-sealable layer is untreated.

23. (currently amended): The laminate film structure of claim 16, wherein the thermoplastic polymer of the heat-sealable layer is selected from the group consisting of an ethylene-propylene random copolymer, a propylene-butylene random copolymer, an ethylene-

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

propylene-butylene terpolymer, a linear low density polyethylene, a low density polyethylene, a metallocene-catalyzed polyethylene, an ethylene vinyl acetate, an ethylene-methyl acrylate, an ionomer, and blends thereof and the functional layer has a polymeric matrix selected from the group consisting of a propylene polymer, an ethylene-propylene block copolymer, a high density polyethylene, an ethylene vinyl alcohol copolymer, an ethylene-propylene random copolymer, a propylene-butylene copolymer, an ethylene-propylene-butylene terpolymer, a medium density polyethylene, a linear low density polyethylene, an ethylene vinyl acetate, an ethylene-methyl acrylate, and blends thereof.

24. (currently amended): The laminate film structure of claim 18, wherein the thermoplastic polymer of the heat-sealable layer is selected from the group consisting of a propylene-butylene random copolymer, a metallocene catalyzed polyethylene, an ethylene vinyl acetate, and an ethylene-methyl acrylate, an ionomer, and blends thereof.

25. (currently amended): The laminate film structure of claim 24, wherein the functional layer comprises a material selected from the group consisting of an ethylene vinyl alcohol copolymer, a propylene-butylene copolymer, an ethylene vinyl acetate, an ethylene-methyl acrylate, and blends thereof.

26. (currently amended): The laminate film structure of claim 24, wherein the antiblocking agent is selected from the group consisting of cross linked silicone resin powder, methyl methacrylate resin powder, a spherical silica powder, and blends thereof.

27. (currently amended): The laminate film structure of claim 18, wherein the core layer comprises a cavitating agent selected from the group consisting of polybutylene terephthalate, calcium carbonate, and blends thereof.

28. (currently amended): The laminate film structure of claim 18, wherein the core layer is from about 5 to about 50 μm thick, the functional layer is from about 0.25 to about 3.0 μm thick, and the heat-sealable layer is from about 0.5 to about 7 μm thick.

29. (currently amended): The laminate film structure of claim 18, wherein the core layer is free of an antistatic agent and a fatty acid amide slip additive.

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

30. (currently amended): A coextruded heat-sealable film structure, comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer; and

~~(d) wherein the heat-sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C.;~~

(e) wherein the core layer has a polymeric matrix selected from the group consisting of a ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene; and

(f) wherein the heat-sealable layer is comprised of a material selected from the group consisting of ethylene vinyl acetate, ethylene-methyl acrylate, an ionomer, and blends thereof.

31. (currently amended): A coextruded heat-sealable film structure, comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer; and

~~(d) wherein the heat sealable film structure has a force over forming collar value of less than 20 pounds and a hot slip value of less than 20 at 290 °C;~~

(e) wherein the core layer has a polymeric matrix selected from the group consisting of a ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene; and

(f) wherein the functional layer is comprised of a material selected from the group consisting of ethylene vinyl acetate, ethylene-methyl acrylate, ethylene vinyl alcohol copolymer, propylene-butylene copolymer, and blends thereof.

32. (currently amended): The coextruded heat-sealable film structure of claim 31, wherein the heat-sealable layer is comprised of a material selected from the group consisting of ethylene vinyl acetate, ethylene-methyl acrylate, an ionomer, and blends thereof.